

# STN- Structure Search

7/3/07

10/507,055

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L10. ANSWER 1 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:1355970 CAPLUS

DOCUMENT NUMBER: 146:99103

TITLE: DNA vaccines comprising antigen-encoding polynucleotide and gemini surfactant as adjuvant

INVENTOR(S): Catchpole, Ian Richard; Papanicolaou, Irene

PATENT ASSIGNEE(S): Glaxo Group Limited, UK

SOURCE: PCT Int. Appl., 143pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006136460	A2	20061228	WO 2006-EP6264	20060620
WO 2006136460	A3	20070614		
<p>W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW</p> <p>RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA</p>				

PRIORITY APPLN. INFO.: GB 2005-12751 A 20050622

AB The present invention provides a novel adjuvant for polynucleotide vaccines, and in particular the present invention provides immunogenic compns. comprising a polynucleotide encoding an antigen capable of eliciting an immune response and an adjuvant comprising an immunostimulatory quantity of a gemini surfactant, or a derivative thereof. The gemini surfactant is selected from those comprising two hydrocarbyl chains linked to a spermine-, spermidine- or pentamine-based hydrophilic head group. The polynucleotide vaccines of the present invention are vaccines that encode an antigen against which it is desired to generate an immune response, and in particular the polynucleotide vaccine may be a DNA vaccine. Also provided by the present invention is the use of gemini surfactants in the manufacture of a polynucleotide vaccine composition for the purpose of enhancing the immune response against the specific antigen that is encoded by the polynucleotide vaccine. Vaccine compns., kits comprising sep. polynucleotide composition and adjuvant compns. for sep. or simultaneous administration, methods of manufacture of the vaccines and kits, and methods of treatment of individuals with the immunogenic compns. and vaccines of the present invention, are provided.

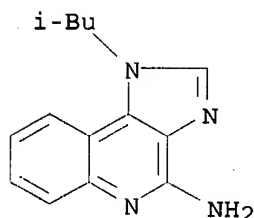
IT 99011-02-6, Imiquimod

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(DNA vaccines comprising antigen-encoding polynucleotide and gemini surfactant as adjuvant)

RN 99011-02-6 CAPLUS

CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(2-methylpropyl)- (CA INDEX NAME)



L10 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:363584 CAPLUS

DOCUMENT NUMBER: 144:389108

TITLE: Adjuvant for DNA vaccines for treating breast cancer

INVENTOR(S): Miller, Richard L.; Provinciali, Mauro; Smorlesi, Arianna

PATENT ASSIGNEE(S): 3M Innovative Properties Co., USA

SOURCE: PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006042254	A2	20060420	WO 2005-US36594	20051007
WO 2006042254	A3	20061109		
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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRIORITY APPLN. INFO.: US 2004-617014P P 20041008  
US 2005-688540P P 20050608

AB The disclosed invention provides a DNA vaccine useful for treating breast cancer. Generally, the vaccine includes an expression vector that encodes a clin. relevant breast cancer-associated antigenic peptide and an immune response modifier (IRM) compound as an adjuvant, specifically, a TLR8 receptor-selective agonist. The IRM compound comprises an imidazoquinoline amine or a thiazoloquinoline amine.

IT 99011-02-6 151751-58-5

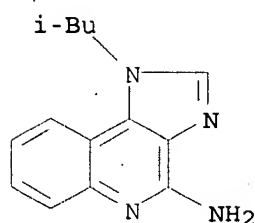
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(adjuvant for DNA vaccines for treating breast cancer).

RN 99011-02-6 CAPLUS

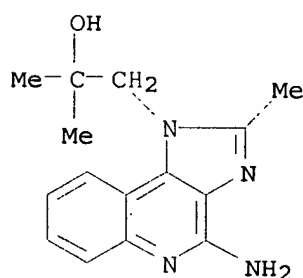
CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(2-methylpropyl)- (CA INDEX NAME)

10/507,055



RN 151751-58-5 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino-α,α,2-trimethyl-  
(CA INDEX NAME)



L10 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:1261796 CAPLUS

DOCUMENT NUMBER: 144:21828

TITLE: Adjuvant compositions and particle-delivered  
codon-optimized DNA vaccines  
encoding HIV antigens, useful in prophylaxis and  
treatment of HIV infections

INVENTOR(S): Braun, Ralph Patrick; Thomsen, Lindy; Van-Wely,  
Catherine; Ertl, Peter

PATENT ASSIGNEE(S): Powdermed Limited, UK; Glaxo Group Limited

SOURCE: U.S. Pat. Appl. Publ., 75 pp., Cont.-in-part of U.S.  
Ser. No. 102,622.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005266024	A1	20051201	US 2005-507928	20050509
US 2003190308	A1	20031009	US 2002-102622	20020319
WO 2003080112	A2	20031002	WO 2003-GB1213	20030319
WO 2003080112	A3	20031106		

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CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,  
TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

10/507,055

US 2005256070 A1 20051117 US 2005-29465 20050106  
PRIORITY APPLN. INFO.: US 2002-102622 A2 20020319  
US 2002-366058P P 20020319  
WO 2003-GB1213 W 20030319

OTHER SOURCE(S): MARPAT 144:21828

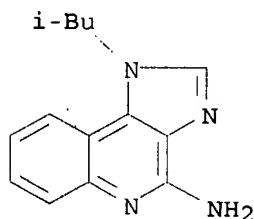
AB The present invention relates to certain adjuvant compns., and to vaccine and/or nucleic acid immunization strategies employing such compns. The invention in particular relates to DNA vaccines that are useful in the prophylaxis and treatment of HIV infections, more particularly when administered by particle mediated delivery. The examples disclose the use of imiquimod, in the form of Aldara cream, to enhance immune response to DNA vaccines encoding viral antigens, epitopes and fusions thereof. Also disclosed is the optimization of the viral coding sequences to more closely resemble the codon usage of highly expressed human genes. Methods used include gold particle-mediated immunization of plasmid DNA using "gene gun" DNA cartridges.

IT 99011-02-6, Imiquimod

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(Aldara cream; adjuvant compns. and particle-delivered codon-optimized DNA vaccines encoding HIV antigens, useful in prophylaxis and treatment of HIV infections)

RN 99011-02-6 CAPLUS

CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(2-methylpropyl)- (CA INDEX NAME)

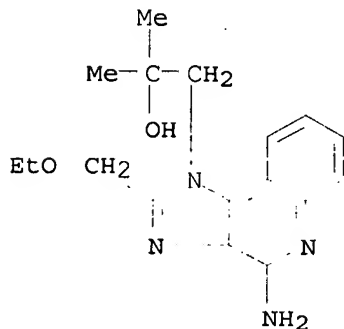


IT 144875-48-9, Resiquimod

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(adjuvant compns. and particle-delivered codon-optimized DNA vaccines encoding HIV antigens, useful in prophylaxis and treatment of HIV infections)

RN 144875-48-9 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino-2-(ethoxymethyl)-  
 $\alpha,\alpha$ -dimethyl- (CA INDEX NAME)

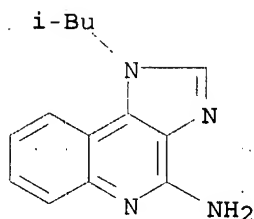


10/507,055

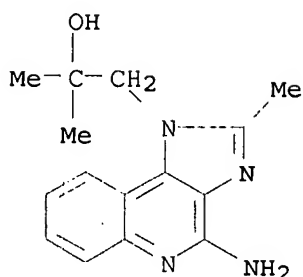
DOCUMENT NUMBER: 143:304194  
TITLE: Imiquimod and S-27609 as adjuvants of DNA vaccination in a transgenic murine model of HER2/neu-positive mammary carcinoma  
AUTHOR(S): Smorlesi, A.; Papalini, F.; Orlando, F.; Donnini, A.; Re, F.; Provinciali, M.  
CORPORATE SOURCE: Immunology Center; Laboratory of Tumor Immunology, INRCA Research Department, Ancona, Italy  
SOURCE: Gene Therapy (2005), 12(17), 1324-1332  
CODEN: GETHEC; ISSN: 0969-7128  
PUBLISHER: Nature Publishing Group  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB DNA vaccination against HER-2/neu is an effective way to induce an immune response able to oppose the spontaneous development of mammary tumors occurring in HER-2/neu transgenic mice. In this study, the authors have evaluated the potential of Imiquimod and the analog S-27609 as adjuvants of DNA vaccination against HER-2/neu in transgenic mice. The association of a DNA vaccine encoding a portion of rat HER2/neu with either Imiquimod or S-27609 was found to delay the development of spontaneous mammary tumors and to reduce their incidence, in comparison with DNA vaccination alone. Almost 80 or 40% of tumor-free mice were found at the end of measurement time in mice vaccinated and supplemented with Imiquimod or S-27609, resp. The antitumor preventive effect was associated with increased antibody and cell-mediated immune responsiveness against HER-2/neu. In mice vaccinated and supplemented with Imiquimod, a small but significant increase of rat p185neu-specific cytotoxicity and of IFN- $\gamma$  and IL-2-producing CD8 T cells, together with a reduction of IL-4-producing CD4 T cells, and a switch from an IgG1 towards a IgG2a phenotype of anti-p185neu antibodies, suggested a TH1 polarization of the immune response. The immunoregulatory efficacy of S-27609 was lower than that observed for Imiquimod. These data highlight the potential of Imiquimod, and, to a lower extent, of S-27609, as immunol. adjuvants of therapeutic DNA vaccines.

IT 99011-02-6, Imiquimod 151751-58-5, S-27609  
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(as adjuvant for DNA vaccination targeting HER2/neu in mammary carcinoma model)  
RN 99011-02-6 CAPLUS  
CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(2-methylpropyl)- (CA INDEX NAME)



RN 151751-58-5 CAPLUS  
CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino- $\alpha,\alpha,2$ -trimethyl-  
(CA INDEX NAME)



REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:453660 CAPLUS

DOCUMENT NUMBER: 143:13290

TITLE: Ultrasound assisted transdermal vaccine delivery method

INVENTOR(S): Cormier, Michel J. N.; Lin, Weiqi; Widera, Georg

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 27 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005112135	A1	20050526	US 2004-971338	20041021
AU 2004292953	A1	20050609	AU 2004-292953	20041021
CA 2546723	A1	20050609	CA 2004-2546723	20041021
WO 2005051455	A2	20050609	WO 2004-US35015	20041021
WO 2005051455	A3	20060413		
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RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 1686904	A2	20060809	EP 2004-819508	20041021
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
CN 1905842	A	20070131	CN 2004-80040535	20041021
BR 2004016822	A	20070306	BR 2004-16822	20041021
PRIORITY APPLN. INFO.:				
			US 2003-524062P	P 20031121
			WO 2004-US35015	W 20041021

AB An apparatus and method for transdermally delivering a vaccine comprising a delivery system having (i) a microprojection member (or system) that includes a plurality of microprojections (or array thereof) that are adapted to pierce through the stratum corneum into the underlying epidermis layer, or epidermis and dermis layers and (ii) an ultrasonic device. In one embodiment, the vaccine is contained in a biocompatible coating that is applied to the microprojection member. In a further embodiment, the delivery system includes a gel pack having a

vaccine-containing hydrogel formulation that is disposed on the microprojection member after application to the skin of a patient. In an alternative embodiment, the vaccine is contained in both the coating and the hydrogel formulation. Thus, ultrasound can augment intracellular DNA uptake after delivery to skin by microprojection array or gel reservoir through microprojection array generated passages and can result in the induction of cellular and humoral immune responses to the antigen encoded by the delivered DNA vaccine construct.

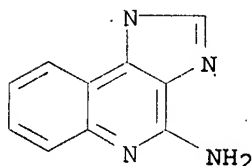
IT 99011-02-6, Imiquimod 112668-45-8, 4-Amino-  
 $\alpha,\alpha$ -dimethyl-1H-imidazo[4,5-c]quinoline-1-ethanol  
 144875-48-9, S-28463

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (ultrasound assisted transdermal vaccine delivery method)

RN 99011-02-6 CAPLUS

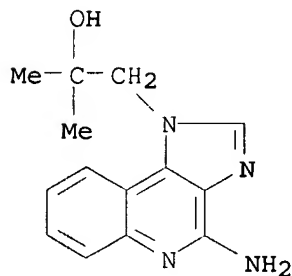
CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(2-methylpropyl)- (CA INDEX NAME)

i-Bu



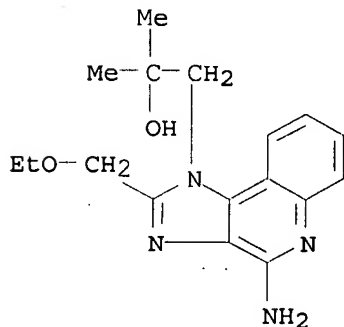
RN 112668-45-8 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino- $\alpha,\alpha$ -dimethyl-  
 (9CI) (CA INDEX NAME)



RN 144875-48-9 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino-2-(ethoxymethyl)-  
 $\alpha,\alpha$ -dimethyl- (CA INDEX NAME)



L10 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:451525 CAPLUS

DOCUMENT NUMBER: 143:6269

TITLE: Artificial fusion protein RENTA for inducing anti-HIV immune response and treating AIDS

INVENTOR(S): Hanke, Tomas; McMichael, Andrew James

PATENT ASSIGNEE(S): Medical Research Council Technology, UK; International Aids Vaccine Initiative; University of Nairobi

SOURCE: PCT Int. Appl., 98 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005047483	A2	20050526	WO 2004-US37699	20041112
WO 2005047483	A3	20050909		

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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1687022	A2	20060809	EP 2004-801004	20041112
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS

PRIORITY APPLN. INFO.:	US 2003-519420P	P	20031112
	WO 2004-US37699	W	20041112

AB The present invention provides artificial fusion (AFPs) designed to elicit an anti-HIV immune response, as well as nucleic acid mols. and expression vectors encoding those proteins. The AFPs of the invention comprise domains from various HIV proteins, including reverse transcriptase (RT), Env (gp41), Nef and Tat proteins, as well as at least one HIV CTL epitope associated with long-term, non progression to AIDS; these domains are biol.-intercatedivated for one or more of the normal activity of those proteins or are partial protein sequences (and similarly biol.-inactivated). RENTA is an AFP in which the HIV domains are from an HIV Clade A consensus sequence and contains addnl. domains, useful for example, in monitoring expression levels or laboratory animal immune responses. Such domains are optionally included in the AFPs. Other aspects of the invention include comps. for and methods of inducing an anti-HIV immune response in a subject, preferably using a DNA-prime-MVA boost strategy, and preferably to induce a cell-mediated immune response.

IT 99011-02-6, Imiquimod

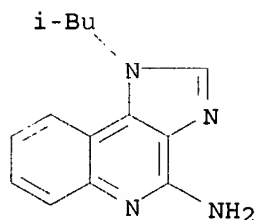
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(artificial fusion protein RENTA for inducing anti-HIV immune response and treating AIDS)

RN 99011-02-6 CAPLUS

CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(2-methylpropyl)- (CA INDEX NAME)





L10 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2005:259907 CAPLUS  
 DOCUMENT NUMBER: 142:334907  
 TITLE: Nucleic acid vaccines encoding  
 GM-CSF and TLR agonist as adjuvant against infection,  
 cancer, allergy and autoimmune disease  
 INVENTOR(S): Bembridge, Gary Peter; Craigen, Jennifer L.  
 PATENT ASSIGNEE(S): Glaxo Group Limited, UK  
 SOURCE: PCT Int. Appl., 106 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005025614	A2	20050324	WO 2004-EP10322	20040913
WO 2005025614	A3	20051006		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004271726	A1	20050324	AU 2004-271726	20040913
CA 2538197	A1	20050324	CA 2004-2538197	20040913
EP 1682175	A2	20060726	EP 2004-765233	20040913
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BR 2004014381	A	20061121	BR 2004-14381	20040913
CN 1878567	A	20061213	CN 2004-80032960	20040913
JP 2007505827	T	20070315	JP 2006-525795	20040913
IN 2006KN00545	A	20070309	IN 2006-KN545	20060307
NO 2006001242	A	20060601	NO 2006-1242	20060317
PRIORITY APPLN. INFO.:			GB 2003-21615	A 20030915
			WO 2004-EP10322	W 20040913

AB The present invention relates to improved nucleic acid vaccines, adjuvant systems, and processes for the preparation of such vaccines and adjuvant systems. In particular, the nucleic acid vaccines and adjuvant systems of the present invention comprise a combination of a nucleotide sequence encoding GM-CSF, or derivs. thereof, and toll-like receptor (TLR) agonists, or derivs. thereof.

IT 99011-02-6, Imiquimod 112668-45-8D, derivs.  
 144875-48-9, Resiquimod 151751-58-5D, derivs.

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL

10/507,055

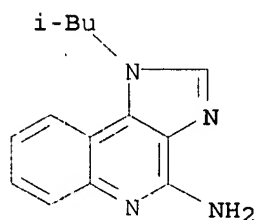
(Biological study); USES (Uses)

(nucleic acid vaccines encoding GM-CSF and TLR

agonist as adjuvant against infection, cancer, allergy and autoimmune disease)

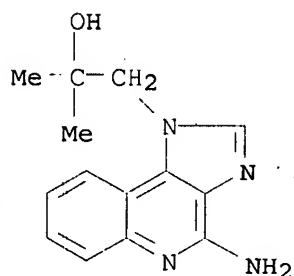
RN 99011-02-6 CAPLUS

CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(2-methylpropyl)- (CA INDEX NAME)



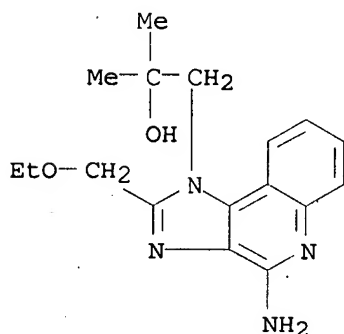
RN 112668-45-8 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino- $\alpha,\alpha$ -dimethyl- (9CI) (CA INDEX NAME)



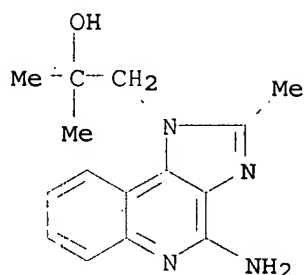
RN 144875-48-9 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino-2-(ethoxymethyl)- $\alpha,\alpha$ -dimethyl- (CA INDEX NAME)



RN 151751-58-5 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino- $\alpha,\alpha,2$ -trimethyl- (CA INDEX NAME)



L10 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:59829 CAPLUS

DOCUMENT NUMBER: 142:133060

TITLE: Liposome complexes with ligands for pattern recognition receptors enhance the immune response

INVENTOR(S): Dow, Steven W.; Fairman, Jeffery

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 46 pp.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005013812	A1	20050120	US 2003-621254	20030714
AU 2004262523	A1	20050217	AU 2004-262523	20040608
CA 2532140	A1	20050217	CA 2004-2532140	20040608
WO 2005013891	A2	20050217	WO 2004-US18363	20040608
WO 2005013891	A3	20070524		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, AP, EA, EP, OA				
EP 1648379	A2	20060426	EP 2004-776412	20040608
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
PRIORITY APPLN. INFO.:			US 2003-621254	A 20030714
			WO 2004-US18363	W 20040608

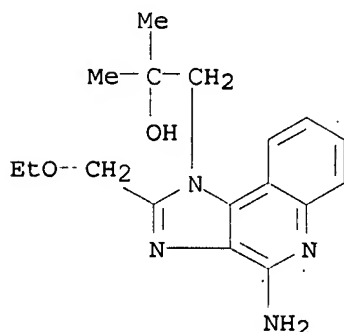
AB The authors disclose methods for enhancing immune activation which are effective for eliciting both a systemic, non-antigen specific immune response and a strong antigen-specific immune response in a mammal. In one example, an enhanced immune response is observed for liposome-peptide-nucleic acid complexes. The method may be effective for protecting a mammal from a disease including cancer, a disease associated with allergic inflammation, an infectious disease, or a condition associated with a deleterious activity of a self-antigen.

IT 144875-48-9D, R 848, liposome complexes  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (enhanced immune system response to)

RN 144875-48-9 CAPLUS

10/507,055

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino-2-(ethoxymethyl)-  
 $\alpha,\alpha$ -dimethyl- (CA INDEX NAME)



L10 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2004:995912 CAPLUS  
DOCUMENT NUMBER: 141:394077  
TITLE: Compositions for inducing immune responses  
INVENTOR(S): O'Hagan, Derek; Singh, Manmohan  
PATENT ASSIGNEE(S): Chiron Corporation, USA  
SOURCE: PCT Int. Appl., 51 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004098509	A2	20041118	WO 2004-US13407	20040430
WO 2004098509	A3	20050324		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW,			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

US 2005107322	A1	20050519	US 2004-837117	20040429
CA 2524217	A1	20041118	CA 2004-2524217	20040430
EP 1624889	A2	20060215	EP 2004-751002	20040430

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

PRIORITY APPLN. INFO.: US 2003-466948P P 20030430  
WO 2004-US13407 W 20040430

AB The invention provides immunogenic compns. comprising an antigen vaccine and at least two adjuvants. The first adjuvant comprises a polymer derived from poly(lactides) and/or poly(lactide-co-glycolides), and a second adjuvant comprises an imidazoquinoline. The antigen is mixed with the first adjuvant by encapsulation, adsorption, or conjugation, and with a pharmaceutically acceptable excipient. Antigens can be derived from various bacteria and viruses, etc. This pharmaceutical composition elicits a cellular immune response when administered to a vertebrate subject. The invention also provides methods of producing immunogenic

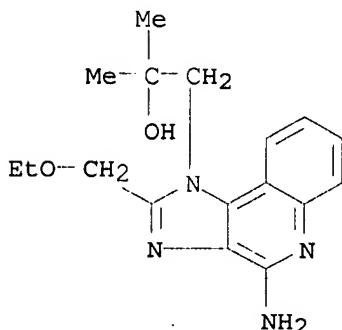
comps., methods for producing a cytotoxic-T lymphocyte responses in vertebrate subjects, and methods of immunization.

IT 144875-48-9, R-848

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(vaccine and adjuvant comps. for inducing cellular immune responses)

RN 144875-48-9 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino-2-(ethoxymethyl)- $\alpha,\alpha$ -dimethyl- (CA INDEX NAME)



L10 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:792856 CAPLUS

DOCUMENT NUMBER: 141:393583

TITLE: Adjunctive immunotherapy of mycobacterial infections

AUTHOR(S): Tomioka, Haruaki

CORPORATE SOURCE: Department of Microbiology and Immunology, Faculty of Medicine, Shimane University, Izumo, 693-8501, Japan  
SOURCE: Current Pharmaceutical Design (2004), 10(26), 3297-3312

CODEN: CPDEFP; ISSN: 1381-6128

PUBLISHER: Bentham Science Publishers Ltd.

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. To cope with the worldwide increase in the prevalence of multidrug-resistant tuberculosis and Mycobacterium avium complex (MAC) infections, a number of new antimycobacterial drugs have been or are being synthesized and developed. Development of new protocols for chemotherapy of refractory mycobacterioses is also sharing promise. In this context, one promising strategy is to devise regimens to treat patients with refractory mycobacterioses using ordinary antimycobacterial agents in combination with appropriate immunomodulators. This article deals with the following matters: an outline of the host immune response to mycobacterial pathogens, particularly in terms of mobilization of the cytokine network in response to mycobacterial infection, and adjunctive immunotherapy using (1) recombinant immunomodulating cytokines, (especially

Th-1

and Th-1-like cytokines such as IFN- $\gamma$ , IL-2, IL-12, IL-18 and GM-CSF), (2) inhibitors of immunosuppressive cytokines (TGF- $\beta$ ) and some proinflammatory tissue-damaging cytokines (TNF- $\alpha$ ), and (3) immunomodulatory agents such as ATP and its analogs, imidazoquinoline, diethyldithiocarbamate, poloxamer, dibenzopyran, galactosylceramide, nonsteroidal anti-inflammatory drugs, Chinese traditional medicines, levamisole, synthesized mycobacterial oligo-DNA, DNA vaccine expressing mycobacterial HSP65 or IL-12, and heat-killed Mycobacterium vaccae. Although adjunctive immunotherapy is fairly efficacious in treating intractable mycobacterioses, it still features

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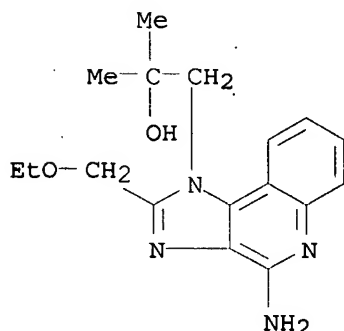
serious problems and dilemmas, such as high cost, occasionally severe side effects, and, in many cases, only modest efficacy in potentiating host defense mechanisms against mycobacterial infections, primarily because of the induction of macrophage-deactivating cytokines during the course of long-term administration of adjunctive agents.

IT 144875-48-9, S28463

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(adjunctive immunotherapy in combination with antimycobacterial chemotherapy of mycobacterial infections)

RN 144875-48-9 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino-2-(ethoxymethyl)-  
 $\alpha,\alpha$ -dimethyl- (CA INDEX NAME)



REFERENCE COUNT: 67 THERE ARE 67 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:285023 CAPLUS

DOCUMENT NUMBER: 141:138769

TITLE: Imiquimod and resiquimod in a mouse model: adjuvants for DNA vaccination by particle-mediated immunotherapeutic delivery

AUTHOR(S): Thomsen, Lindy L.; Topley, Peter; Daly, Maria G.; Brett, Sara J.; Tite, John P.

CORPORATE SOURCE: Department of Immunotherapeutics, GlaxoSmithKline Medicines Research Centre, Hertfordshire, SG1 2NY, UK

SOURCE: Vaccine (2004), 22(13-14), 1799-1809  
CODEN: VACCDE; ISSN: 0264-410X

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Imiquimod, an immune response modifier and inducer of cytokines in vitro and in vivo, has been shown to have potent antiviral and antitumor activity and to act as an adjuvant for protein vaccination. We have undertaken studies in mice to investigate the potential of imiquimod and resiquimod to adjuvant DNA vaccination. These imidazoquinolines were administered by s.c. injection at the vaccination site immediately after particle-mediated immunotherapeutic delivery of plasmid DNA using a gene gun. Imiquimod was found to increase the number and maturation status of dendritic cells in draining lymph nodes, and to enhance antigen-specific CD4+ and CD8+ T cell responses, as assessed by analyses of clonal expansion, and the quantity and kinetics of cytokine production from these cells in lymph nodes and spleens collected after vaccination. A more substantial increase in IFN- $\gamma$ -producing, compared with IL-4-producing CD4+ T cells suggested that imiquimod biased the immune response towards a predominance of Th1 cells. The analog resiquimod was found to be to produce a similar Th1 biased immune response with a 10-fold reduced dose

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compared with imiquimod. Collectively, these studies suggest that both imiquimod and resiquimod may be suitable adjuvants for therapeutic DNA vaccines requiring induction of potent cytotoxic T cell responses.

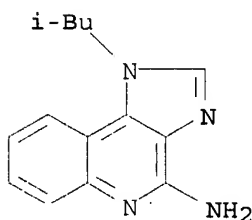
IT 99011-02-6, Imiquimod 144875-48-9, Resiquimod

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(imiquimod and resiquimod as adjuvants in DNA vaccination induce Th1-biased responses)

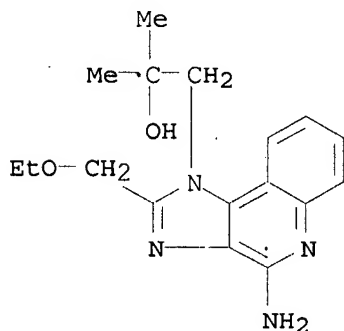
RN 99011-02-6 CAPLUS

CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(2-methylpropyl)- (CA INDEX NAME)



RN 144875-48-9 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino-2-(ethoxymethyl)- $\alpha,\alpha$ -dimethyl- (CA INDEX NAME)



REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:285022 CAPLUS

DOCUMENT NUMBER: 141:138768

TITLE: Topical delivery of imiquimod to a mouse model as a novel adjuvant for human immunodeficiency virus (HIV) DNA

AUTHOR(S): Zuber, Anne Kjerrstrom; Brave, Andreas; Engstrom, Gunnel; Zuber, Bartek; Ljungberg, Karl; Fredriksson, Malin; Benthin, Reinhold; Isaguliantz, Maria G.; Sandstrom, Eric; Hinkula, Jorma; Wahren, Britta  
CORPORATE SOURCE: Microbiology and Tumorbiology Center, Karolinska Institute, Stockholm, SE-17182, Swed.

SOURCE: Vaccine (2004), 22(13-14), 1791-1798

CODEN: VACCDE; ISSN: 0264-410X

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We evaluated the compound imiquimod as a possible adjuvant for DNA

immunization against human immunodeficiency virus (HIV). We found that gene-gun epidermal delivery of the DNA in combination with imiquimod resulted in the strongest HIV specific immune responses. The effect of imiquimod was further compared to that of recombinant granulocyte macrophage-colony stimulating factor (GM-CSF), a known DNA vaccine adjuvant. Both adjuvants were able to enhance the immune responses induced by the HIV-1 genes alone. The delivery of an adjuvant as a topical cream rather than through injections has a clear clinical benefit. We show for the first time that imiquimod can act as an adjuvant for DNA vaccination.

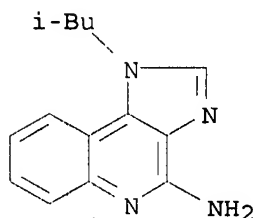
IT 99011-02-6, Imiquimod

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(topical imiquimod as adjuvant for human immunodeficiency virus DNA vaccine)

RN 99011-02-6 CAPLUS

CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(2-methylpropyl)- (CA INDEX NAME)



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 13 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:285021 CAPLUS

DOCUMENT NUMBER: 141:138767

TITLE: Resiquimod is a modest adjuvant for HIV-1 gag-based genetic immunization in a mouse model

AUTHOR(S): Otero, Miguel; Calarota, Sandra A.; Felber, Barbara; Laddy, Dominic; Pavlakakis, George; Boyer, Jean D.; Weiner, David B.

CORPORATE SOURCE: School of Medicine, Chance Laboratories, Department of Pathology and Laboratory Medicine, University of Pennsylvania, Philadelphia, PA, 19104-6100, USA

SOURCE: Vaccine (2004), 22(13-14), 1782-1790

CODEN: VACCDE; ISSN: 0264-410X

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB DNA vaccines have been effective at generating useful immune responses in many animal species. However, it is clearly desirable to increase their potency. The identification of adjuvants that increase their cell-mediated immune (CMI) response is therefore an important goal. Resiquimod is an imiquimod analog proven to activate dendritic cells through TLR-7. The adjuvant capacity of resiquimod has not, to our knowledge, been studied in the context of genetic immunization. Here, we studied resiquimod as an adjuvant for plasmid vaccine therapy by intra-muscular immunization of BALB/c mice with HIV-1 gag DNA vaccine without and with several concns. of resiquimod (ranging from 5-100 nM). We observed that resiquimod moderately enhanced IFN- $\gamma$  production as measured by a peptide-based ELISPOT assay compared to that obtained in mice immunized with DNA gag only. Antigen-specific T-cell proliferation studies showed a several-fold increase in the stimulation index in mice immunized with DNA gag +50 nM of resiquimod as compared to



mice receiving DNA gag alone. Antibody titer also increased, while the antibody isotyping data showed a strong Th1 biased type response. Anal. of cytokine production in serum samples demonstrated a stronger Th1 cytokine bias in the presence of resiquimod. Furthermore, relevant increase in IL-4 production, as measured by ELISPOT assay, was not observed. Our results show

that resiquimod can have modest adjuvant activity, in a DNA formulation, driving the immune system towards a cell-mediated immune response. Addnl. studies involving this adjuvant for DNA vaccines are underway.

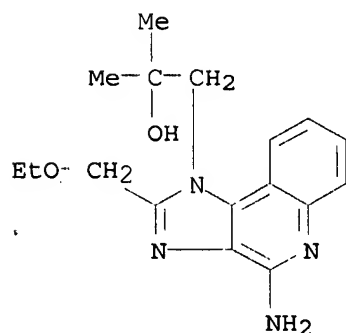
IT 144875-48-9, Resiquimod

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(resiquimod as adjuvant for HIV-1 gag DNA vaccine induces interferon- $\gamma$  and Th1 responses)

RN 144875-48-9 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino-2-(ethoxymethyl)- $\alpha,\alpha$ -dimethyl- (CA INDEX NAME)



REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 14 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:284931 CAPLUS

DOCUMENT NUMBER: 140:355453

TITLE: HPV-16 L1 genes with inactivated negative RNA elements induce potent immune responses

AUTHOR(S): Rollman, Erik; Arnheim, Lisen; Collier, Brian; Oberg, Daniel; Hall, Hakan; Klingstrom, Jonas; Dillner, Joakim; Pastrana, Diana V.; Buck, Chris B.; Hinkula, Jorma; Wahren, Britta; Schwartz, Stefan

CORPORATE SOURCE: Department of Virology, Swedish Institute for Infectious Disease Control, Solna, S-171 82, Swed.

SOURCE: Virology (2004), 322(1), 182-189

CODEN: VIRLAX; ISSN: 0042-6822

PUBLISHER: Elsevier Science

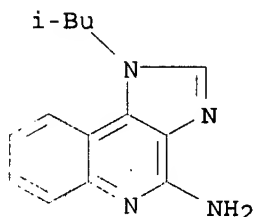
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Introduction of point mutations in the 5' end of the human papillomavirus type 16 (HPV-16) L1 gene specifically inactivates neg. regulatory RNA processing elements. DNA vaccination of C57Bl/6 mice with the mutated L1 gene resulted in improved immunogenicity for both neutralizing antibodies as well as for broad cellular immune responses. Previous reports on the activation of L1 by codon optimization may be explained by inactivation of the regulatory RNA elements. The modified HPV-16 L1 DNA that induced anti-HPV-16 immunity may be seen as a complementary approach to protein subunit immunization against papillomavirus.

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IT 99011-02-6, Imiquimod  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(HPV-16 L1 genes with inactivated neg. RNA elements induce potent  
immune responses)  
RN 99011-02-6 CAPLUS  
CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(2-methylpropyl)- (CA INDEX NAME)



REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:777630 CAPLUS

DOCUMENT NUMBER: 139:291106

TITLE: Immune adjuvant comprising imidazoquinoline amine or  
imidazopyridine amine for nucleic  
acid vaccine delivery

INVENTOR(S): Braun, Ralph Patrick

PATENT ASSIGNEE(S): Powderject Research Limited, UK

SOURCE: PCT Int. Appl., 102 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

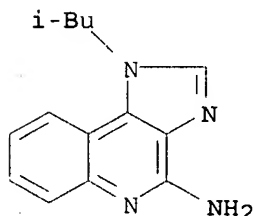
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003080114	A2	20031002	WO 2003-GB1203	20030319
WO 2003080114	A3	20031106		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 2003185835	A1	20031002	US 2002-102615	20020319
CA 2484049	A1	20031002	CA 2003-2484049	20030319
AU 2003216851	A1	20031008	AU 2003-216851	20030319
EP 1487485	A2	20041222	EP 2003-712390	20030319
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
JP 2005526793	T	20050908	JP 2003-577939	20030319
US 2006088542	A1	20060427	US 2004-508143	20041118
PRIORITY APPLN. INFO.:			US 2002-102615	A 20020319
			US 2002-366057P	P 20020319
			WO 2003-GB1203	W 20030319
OTHER SOURCE(S):	MARPAT 139:291106			

AB The invention relates to the fields of vaccines, vaccine adjuvants, mol. biol. and immunol., and generally relates to adjuvants and nucleic acid immunization techniques. More specifically, the invention relates to certain adjuvant compns., and to vaccine and/or nucleic acid immunization strategies employing such compns. The adjuvant compound is an imidazoquinoline amine, imidazopyridine amine, 6,7-fused cycloalkylimidazopyridine amine, 1,2-bridged imidazoquinoline amine, thiazolo- or oxazolo-quinolinamine or pyridinamines, imidazonaphthyridine or tetrahydroimidazonaphthyridine amine; especially imidazoquinoline, imiquimod or resiquimod. The vaccine is DNA vaccine comprising gene encoding HBsAg, HSV-2 antigen (e.g. gD or gB protein), cholera toxin or HSP70. The vaccine compns. are administered topically or transdermally in the forms of particles or creams.

IT 99011-02-6, Imiquimod 144875-48-9, Resiquimod  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (immune adjuvant comprising imidazoquinoline amine or imidazopyridine amine for nucleic acid vaccine delivery)

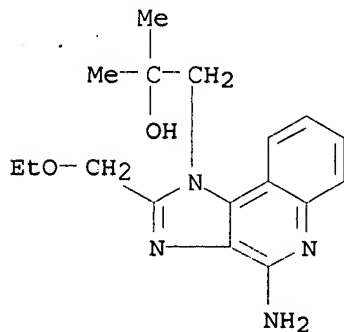
RN 99011-02-6 CAPLUS

CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(2-methylpropyl)-, (CA INDEX NAME)



RN 144875-48-9 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino-2-(ethoxymethyl)- $\alpha,\alpha$ -dimethyl- (CA INDEX NAME)



L10 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:777628 CAPLUS

DOCUMENT NUMBER: 139:291105

TITLE: Immune adjuvant comprising imidazoquinoline or imidazopyridine amines for DNA vaccines

INVENTOR(S): Braun, Ralph Patrick; Thomsen, Lindy; Van-Wely, Catherine; Ertl, Peter

PATENT ASSIGNEE(S): Powderject Research Limited, UK; Glaxo Group Limited

SOURCE: PCT Int. Appl., 137 pp.  
 CODEN: PIXXD2

10/507,055

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003080112	A2	20031002	WO 2003-GB1213	20030319
WO 2003080112	A3	20031106		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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US 2003190308	A1	20031009	US 2002-102622	20020319
CA 2484044	A1	20031002	CA 2003-2484044	20030319
AU 2003216852	A1	20031008	AU 2003-216852	20030319
EP 1487486	A2	20041222	EP 2003-712391	20030319
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JP 2005533752	T	20051110	JP 2003-577938	20030319
US 2005256070	A1	20051117	US 2005-29465	20050106
US 2005266024	A1	20051201	US 2005-507928	20050509
PRIORITY APPLN. INFO.:				
			US 2002-102622	A 20020319
			US 2002-366058P	P 20020319
			WO 2003-GB1213	W 20030319

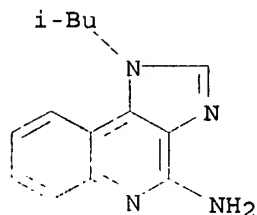
OTHER SOURCE(S): MARPAT 139:291105

AB The invention relates to certain adjuvant compns., and to vaccine and/or nucleic acid immunization strategies employing such compns. The invention in particular relates to DNA vaccines that are useful in the prophylaxis and treatment of HIV infections, more particularly when administered by particle mediated delivery. The adjuvant uses imidazoquinoline amine, imidazopyridine amine, 6,7-fused cycloalkylimidazopyridine amine, 1,2-bridged imidazoquinoline amine, thiazolo- and oxazoloquinolinamine or pyridinamine, imidazonaphthyridine or tetrahydronaphthyridine amine to enhance immune response.

IT 99011-02-6, Imiquimod 144875-48-9, Resiquimod  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (immune adjuvant containing imidazoquinoline or imidazopyridine amine for DNA vaccines)

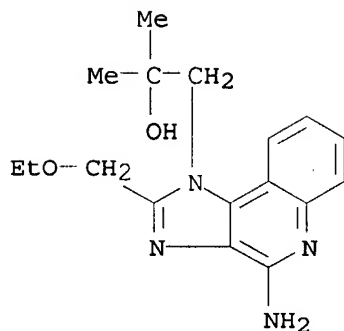
RN 99011-02-6 CAPLUS

CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(2-methylpropyl)- (CA INDEX NAME)



RN 144875-48-9 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino-2-(ethoxymethyl)-  
 $\alpha,\alpha$ -dimethyl- (CA INDEX NAME)



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L10 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2003:757546 CAPLUS  
 DOCUMENT NUMBER: 139:265687  
 TITLE: Improvements in DNA vaccination by  
 using imidazoquinolinamine  
 INVENTOR(S): Thomsen, Lindy Louise; Tite, John Philip  
 PATENT ASSIGNEE(S): Glaxo Group Limited, UK  
 SOURCE: PCT Int. Appl., 43 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003077944	A1	20030925	WO 2003-EP2878	20030318
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CA 2479315	A1	20030925	CA 2003-2479315	20030318
AU 2003212369	A1	20030929	AU 2003-212369	20030318
EP 1485125	A1	20041215	EP 2003-708257	20030318
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US 2005143284	A1	20050630	US 2003-507055	20030318
JP 2005526085	T	20050902	JP 2003-575997	20030318
PRIORITY APPLN. INFO.:			GB 2002-6461	A 20020319
			WO 2003-EP2878	W 20030318

OTHER SOURCE(S): MARPAT 139:265687

AB The present invention relates to improvements in DNA vaccination and in particular, methods of vaccinating a mammal against disease states, and to the use of imidazo[4,5-c]quinolin-4-amine derivative (I) adjuvants in the manufacture of medicaments for boosting previously vaccinated individuals. The method comprises the steps of: vaccinating the individual with a first vaccine composition on 1 or more occasions, characterized in that the vaccine contain an antigen but does not comprise I and after waiting an appropriate length of time, vaccinating the same individual with

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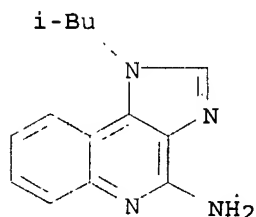
a second vaccine, characterized in that the second vaccine composition comprises the same antigen as the first vaccine, the second vaccine being administered with I.

IT 99011-02-6, Imiquimod

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(improvements in DNA vaccination by using  
imidazoquinolinamine)

RN 99011-02-6 CAPLUS

CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(2-methylpropyl)- (CA INDEX NAME)



REFERENCE COUNT:

6

THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 18 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:240588 CAPLUS

DOCUMENT NUMBER: 136:261816

TITLE: Use of imidazoquinolinamines as adjuvants in  
DNA vaccination

INVENTOR(S): Thomsen, Lindy Louise; Tite, John Philip; Topley, Peter

PATENT ASSIGNEE(S): Glaxo Group Limited, UK

SOURCE: PCT Int. Appl., 62 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002024225	A1	20020328	WO 2001-GB4207	20010920
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RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2422863	A1	20020328	CA 2001-2422863	20010920
AU 200187908	A	20020402	AU 2001-87908	20010920
EP 1318835	A1	20030618	EP 2001-967535	20010920
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BR 2001013982	A	20030819	BR 2001-13982	20010920
HU 200301180	A2	20040301	HU 2003-1180	20010920
JP 2004509150	T	20040325	JP 2002-528295	20010920
NZ 524792	A	20040924	NZ 2001-524792	20010920
CA 2461056	A1	20030327	CA 2002-2461056	20020918
WO 2003025003	A2	20030327	WO 2002-EP10592	20020918
WO 2003025003	A3	20031204		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

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AU 2002362368 A1 20030401 AU 2002-362368 20020918  
EP 1427826 A2 20040616 EP 2002-798748 20020918

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

BR 2002012619	A	20040817	BR 2002-12619	20020918
HU 200402259	A2	20050128	HU 2004-2259	20020918
CN 1606624	A	20050413	CN 2002-823087	20020918
JP 2005511019	T	20050428	JP 2003-528849	20020918
NZ 531814	A	20051028	NZ 2002-531814	20020918
NO 2003001274	A	20030519	NO 2003-1274	20030319
MX 2003PA02453	A	20030619	MX 2003-PA2453	20030319
ZA 2003002231	A	20040505	ZA 2003-2231	20030320
IN 2003DN00419	A	20070302	IN 2003-DN419	20030320
US 2004076633	A1	20040422	US 2003-380981	20030923
ZA 2004002189	A	20050429	ZA 2004-2189	20040318
NO 2004001157	A	20040519	NO 2004-1157	20040319
IN 2004KN00369	A	20060217	IN 2004-KN369	20040319
US 2007015721	A1	20070118	US 2004-490011	20041025

PRIORITY APPLN. INFO.:

GB 2000-23008	A	20000920
WO 2001-GB4207	W	20010920
GB 2001-29604	A	20011211
GB 2002-6462	A	20020319
WO 2002-EP10592	W	20020918

OTHER SOURCE(S): MARPAT 136:261816

AB The present invention relates to the use of a 1H-imidazo[4,5-c]quinolin-4-amine derivative as an adjuvant for use with nucleic acid vaccination. The vaccine comprises the adjuvant and a nucleotide sequence encoding an antigen associated with a disease. The diseases can include infection, cancer, allergy, and autoimmunity.

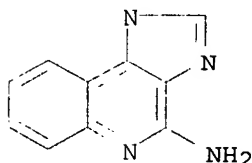
IT 99011-02-6, Imiquimod 112668-45-8 144875-48-9, Resiquimod 151751-58-5

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(imidazoquinolinamines as adjuvants in DNA vaccination)

RN 99011-02-6 CAPLUS

CN 1H-Imidazo[4,5-c]quinolin-4-amine, 1-(2-methylpropyl)- (CA INDEX NAME)

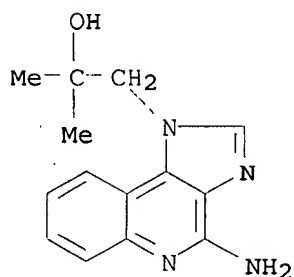
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RN 112668-45-8 CAPLUS

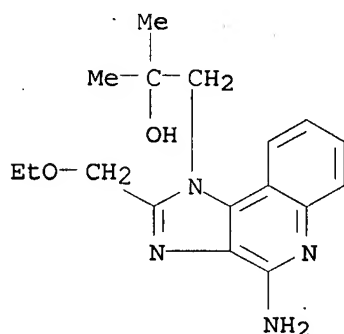
CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino- $\alpha,\alpha$ -dimethyl- (9CI) (CA INDEX NAME)

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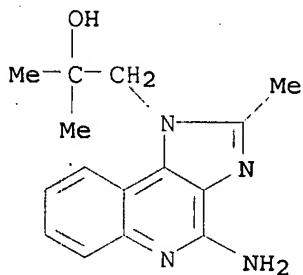
RN 144875-48-9 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino-2-(ethoxymethyl)-  
alpha,alpha-dimethyl- (CA INDEX NAME)



RN 151751-58-5 CAPLUS

CN 1H-Imidazo[4,5-c]quinoline-1-ethanol, 4-amino-alpha,alpha,2-trimethyl-  
(CA INDEX NAME)



REFERENCE COUNT:

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THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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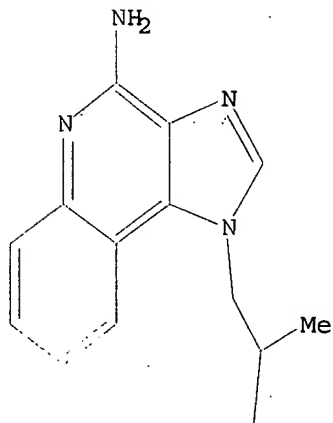
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L1 STR



Structure attributes must be viewed using STN Express query preparation.

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